ABSTRACT OF THE DISCLOSURE

The present invention provides a method and apparatus for increasing the efficiency at which computer viruses and corrupted files are detected on computer operating systems that support multitasking. The flexibility of the system allows data processing systems to reduce scanning time by utilizing multitasking to perform virus scans in parallel, subject to the amount of available memory and the number of simultaneous tasks that are available to be used by the parallel processes. This is achieved by (1) detecting the maximum number of simultaneous tasks which the operating system can allocate to the scanning operation, (2) detecting the maximum amount of free memory which can be made available to the scanning operation, (3) calculating the maximum number of processes (tasks) that can be supported by the currently available free memory, (4) launching multiple, simultaneous processes to scan for computer virus signatures, (5) detecting the subsequent amount of system memory and the number of simultaneous tasks available, (6) providing negative or positive feedback depending on the amount of system memory and the number of simultaneous tasks currently available, (7) modifying the number of active tasks based on this feedback, and (8) repeating and maintaining this feedback process in real-time.